A narrow boulevard provides a median which acts as a separator between the two travel directions, improving safety. The narrow boulevard shoulder areas provide adequate room for U-turns. Provision for U-turns is necessitated because many cross streets and driveways will not have median openings (i.e., access management). For many adjacent land uses, there will be only "right turns in" and "right turns out" of the property. Left turns would be accomplished by a right turn from the cross street/driveway into traffic flow and then a subsequent U-turn.

Because of the different widths of these proposed roadway cross-sections, they have different impacts (refer to Figure 2-1). To minimize them, the placement of the road (i.e., left or right of the existing centerline of M-15) was key to starting the second phase of the analysis of alternatives. This was more the case with the boulevard as the five-lane alternative can be built mostly in the existing right-of-way of 120 feet.

In refining the alignments of the alternatives, important resources, like wetlands and historic properties, were avoided to the extent possible while balancing the displacements of houses and businesses. Historic and wetland resources are protected by federal and/or state laws.

To start the refinement process, a preliminary assessment by a specialist was made of historic resources in the corridor. All structures over 50 years old were categorized with regard to their potential for *National Register* eligibility. A scale of 1 to 3 was used, with 1 representing sites that, on a preliminary basis, were judged to have reasonable potential for eligibility. Sites classified as 2 were considered to be of secondary interest. Sites classified as 3 were considered to be of possible interest. The last two categories were included as research sometimes finds such sites to be of greater significance than is readily apparent in a preliminary survey.

Wetlands in the corridor were similarly examined and rated by a specialist in three categories. For the highest score of 1, wetlands were generally forested, classed as a fen (a particularly valuable wetland type), or part of a large wetland complex protecting key lakes and streams. The lowest scoring wetlands (3) are typically associated with roadside ditches and are generally considered low-diversity communities, often inhabited by non-native species. These lower scoring wetlands have value in filtering runoff and storing stormwater, and have functions well worth preserving or replicating, but they are generally easier to replicate

through compensatory mitigation than forested and other higher-scoring wetlands. The intermediate-scoring wetlands (2) fell between the higher and lower value wetlands in composition and function.

With potential historic sites and wetlands located, the alignments of the five-lane and narrow boulevard alternatives were examined to determine where they should deviate from a centerline configuration. There are numerous situations where there are important resources on both sides of the road. In these cases, judgments were made regarding the value of the resource and the number of resources and/or acreages involved. The following paragraphs explain the considerations made in shifting the alignment east or west to avoid or minimize impacts to these identified resources.

South of the I-69 interchange there are established commercial uses at the intersection of Lippincott Road, and numerous driveways to residences to the south. This area was considered best served by a five-lane road under either alternative due to the extensive dislocations that would be necessary if a narrow boulevard were constructed.

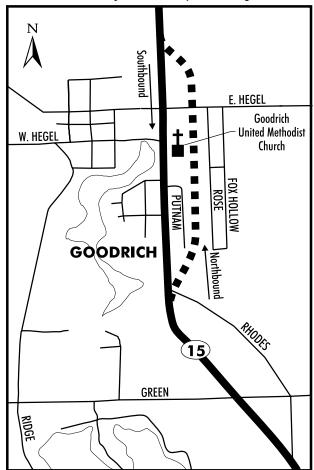
Further south, there is a potential *National Register*-eligible historic site that fronts onto Montague. M-15 abuts its back yard. The narrow boulevard would take land from the site, but it is likely that the depth of the lot would allow construction.

South of Atherton Road, on the west side of M-15, is the Louhelen Bahai School and Conference Center. It is potentially eligible for listing on the *National Register*. The narrow boulevard alignment was shifted to avoid it. The alignment stays on the east to avoid an old school house, likely to be *National Register*-eligible, on the southwest corner of M-15 and Bristol Road. The five-lane alternative would fit through this section in existing right-of-way.

At Coolidge Road the alignment would shift slightly to the east to avoid impacts to Burkland Textron Industries.

In Goodrich, the five-lane alternative could be carried through town, holding the west right-of-way line where it is today. Or, a one-way pair could be constructed with M-15's width not being adjusted and this section dedicated to southbound traffic (Figure 2-2). The north leg of the one-way pair would be aligned along the rear of the lots of the houses that face Rose Lane. This alignment was followed to preserve as much land as

Figure 2-2
One-Way Pair Concept Drawing



possible that would be contiguous to the Goodrich United Methodist Church. That church, in conjunction with a private developer, plans a 100-unit senior center on its property. Expansions of the church building itself are also planned.

The north leg of the one-way pair would have minor wetland involvement and no impacts to historic resources. Some concerns exist about aesthetics and noise. The south leg of the road, i.e., M-15, would continue to operate within the existing right-of-way and offer the opportunity for enhancements to the community, including historic resources. The existing pavement for through traffic could be narrowed and street trees, "bumpouts" for plantings and street furniture, and other features could be added. The speed limit could be lowered to 35 miles per hour from the present 45 miles per hour. These features

would enhance the characteristics of a potential historic district on the west side of the road south of West Hegel (Main Street) and a potential *National Register* house on the east side (8083 State Road).

The one-way pair concept was developed in response to the historic character of the Village's core. It was believed that two buildings on the east of M-15 (8049 and 8083 State Road) were of historical significance and eligible for *National Register* listing. The Goodrich/Atlas Historical Web Page refers to the property at 8049 State Road as "...the first frame house built in 1838 by Enos Goodrich," the founder of the Village. A 1960 local historical study sponsored by the Goodrich Women's Club also cited it as "...built by Enos Goodrich in 1838." However, more detailed study by the M-15 consultants reveals that the original Goodrich house is on the northwest corner of the intersection of M-15 at Park (8122 State Road). Additionally, the architectural integrity of the building at 8049 State Road is so seriously compromised that it is likely not to be listed on the *National Register*, regardless of its age. Therefore, a driving force leading to the one-way pair concept has been removed. This conclusion has been reviewed with the State Historic Preservation Officer.

Nevertheless, it must be recognized that farther south on the east side of M-15 (8083 State Road) is the Hawes House (circa 1870). It is believed to be architecturally intact and potentially eligible for the *National Register*.

On the west side of M-15 in Goodrich is a district of buildings that is potentially eligible for the *National Register*. If the five-lane alternative were constructed it would be shifted east to avoid taking any frontage from the historic district. This would cause M-15 to encroach into the yard of the Hawes House on the opposite side of the road. This type widening would likely allow construction of a five-lane M-15, but would not enhance the community or its historic resources.

At the south end of Goodrich, the northbound leg of the one-way pair would pass through several platted residential lots. If these lots were developed, or if other development occurred along this alignment (like the senior center), it would make the one-way pair less feasible.

Between Auten and Groveland roads there are fen wetlands (Category 1, highest) on both sides of M-15, but the Category 1 wetlands on the east are more extensive. So, the alignment of the narrow boulevard through this area is shifted slightly to the west of existing M-15. In this area, the boulevard would be made <u>very narrow</u>, with a 120-foot-wide right-of way, to avoid as much of the fen area as possible. The five-lane option would largely fit into existing right-of-way.

From Groveland Road to Mill Street in Ortonville, the alignment was shifted to the east. South of Groveland on the east side is a Category 2 historic farmstead. There is a lake across M-15. Further south is another Category 2 farmhouse and the Ortonville Cemetery on the west side of M-15. The Ortonville Cemetery is potentially *National Register*-eligible. It acts as the control in this section. The narrow boulevard alternative would hold the future pavement edge near where it is today, but push new right-of-way acquisition to the east where the commercial development of Ortonville begins. By comparison, the five-lane alternative would fit within existing right-of-way and maintain the existing centerline.

The shift of the narrow boulevard to the east would end south of Narin Street. The principal concern moving south in this area is commercial and residential development. The narrow boulevard would take from both

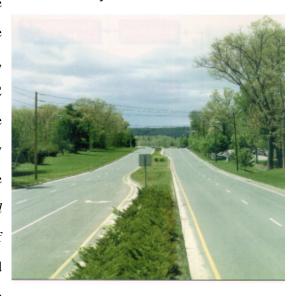
sides. No wetlands or historic sites are of sufficient magnitude to cause the alignment to vary. Duck Creek passes through this area, but its emergent wetlands (Category 2) are on both sides of M-15.

At Wolfe Road, the Old Stone house gift shop is potentially eligible for the *National Register* (Category 1). Two round rock pillars in its front are likely in the existing right-of-way. It is believed that the setback of this architectural resource will allow preservation of its setting, even with the pavement closer. Directly across M-15 is St. Ann's Catholic Church.

North of Glass Road, the alignment of a narrow boulevard would be moved to the east to avoid taking the entire row of cottages along the west side of the road that line Bald Eagle Lake. This shift to the east is maintained south to the vicinity of Weideman Drive. There are extensive wetlands (Category 1 and 2) through this section, but their greater extent is on the west side, pushing the alignment to the east. A five-lane section would fit within existing right-of-way.

South of Weideman Drive the narrow boulevard alignment shifts to the west of the existing centerline due to extensive wetlands (Category 1) on the east. More wetlands hold the alignment to this side south of Oak Hill Road. At that point, the alignment shifts back to the east due to a Category 2 historic site on the west side of M-15 north of Ratalee Lake road. The alignment remains centered the rest of the way south due to the extensive development on both sides of the road. This is true despite the presence of a potential *National Register* home on the east side of M-15 on the north side of Deer Ridge Drive. It is noteworthy a boulevard here would be very narrow, i.e., right-of-way at 120 feet. This is possible

Figure 2-3 Very Narrow Boulevard



because adjoining property does not have direct access to M-15 but is channeled to cross streets. However, it does not appear possible to extend even the very narrow boulevard concept south beyond Cranberry Lake Road as it would interfere with access/egress of Amy Drive and several properties in the vicinity that front on M-15. Additionally, a proposal under review by Independence Township to develop the property in the

northwest quadrant of the interchange has a stipulation that access must not be provided to Cranberry Lake Road. That means it must gain access to M-15 which will not be compatible with the boulevard concept in this area.